



November 05, 2015

Tom Moe USS Corporation P.O. Box 417 Mountain Iron, MN 55768

RE: Project: NPDES-LINE 3 Wkly Pace Project No.: 1256139

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heather R Zika

Haller Zto

heather.zika@pacelabs.com

Project Manager

Enclosures

cc: Terri Sabetti, Northeast Technical





315 Chestnut Street Virginia, MN 55792 (218) 742-1042



CERTIFICATIONS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792 Alaska Certification #MN01084 Arizona Department of Health Certification #AZ0785 Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification # : 998027470 WA Department of Ecology Lab ID# C1007 Nevada DNR #MN010842015-1 Oklahoma Department of Environmental Quality





SAMPLE SUMMARY

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1256139001	WS-002 Scrubber Make-Up	Water	10/28/15 08:40	10/28/15 14:15
1256139002	WS-003 Thickner Overflow	Water	10/28/15 08:40	10/28/15 14:15

(218) 742-1042



SAMPLE ANALYTE COUNT

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1256139001	WS-002 Scrubber Make-Up	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	DMB	1	PASI-V
1256139002	WS-003 Thickner Overflow	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	DMB	1	PASI-V



ANALYTICAL RESULTS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Date: 11/05/2015 01:57 PM

Sample: WS-002 Scrubber Make	-Up Lab ID:	1256139001	Collected	: 10/28/15	5 08:40	Received: 10/	28/15 14:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
200.7 MET ICP, Lab Filtered	Analytical	Method: EPA	200.7 Prepar	ration Meth	od: EP	A 200.7			
Calcium, Dissolved	91.2	mg/L	5.0	0.29	10	10/29/15 17:07	11/03/15 09:28	7440-70-2	
Magnesium, Dissolved	207	mg/L	5.0	0.67	10	10/29/15 17:07	11/03/15 09:28	7439-95-4	
Total Hardness, Dissolved	1080	mg/L	100	50.0	10	10/29/15 17:07	11/03/15 09:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0						
Sulfate	803	mg/L	20.0	0.89	10		10/31/15 07:43	14808-79-8	
Sample: WS-003 Thickner Overf	low Lab ID:	1256139002	Collected	: 10/28/1	5 08:40	Received: 10/	28/15 14:15 Ma	atrix: Water	
Sample: WS-003 Thickner Overf	low Lab ID:	1256139002	Collected Report	: 10/28/1	5 08:40	Received: 10/	28/15 14:15 Ma	atrix: Water	
Sample: WS-003 Thickner Overf Parameters	Results	1256139002 Units		: 10/28/1	5 08:40 DF	Received: 10/	28/15 14:15 Ma	cAS No.	Qual
Parameters	Results		Report Limit	MDL	DF	Prepared			Qual
Parameters 200.7 MET ICP, Lab Filtered	Results	Units	Report Limit	MDL	DF	Prepared			Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved	Results Analytical	Units Method: EPA 2	Report Limit 200.7 Prepar	MDL ration Meth	DF nod: EP/	Prepared A 200.7	Analyzed	CAS No.	Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved Magnesium, Dissolved	Results Analytical	Units Method: EPA 2 mg/L	Report Limit	MDL ration Meth	DF nod: EP/	Prepared A 200.7 10/29/15 17:07	Analyzed 11/03/15 09:31	CAS No. 7440-70-2	Qual
·	Analytical 588 152 2090	Units Method: EPA 2 mg/L mg/L	Report Limit 200.7 Prepar 5.0 5.0 100	MDL ration Meth 0.29 0.67	DF nod: EP/ 10 10	Prepared A 200.7 10/29/15 17:07 10/29/15 17:07	Analyzed 11/03/15 09:31 11/03/15 09:31	CAS No. 7440-70-2	Qual



QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Magnesium, Dissolved

Date: 11/05/2015 01:57 PM

QC Batch: MPRP/6094 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET Dissolved

Associated Lab Samples: 1256139001, 1256139002

METHOD BLANK: 263154 Matrix: Water

Associated Lab Samples: 1256139001, 1256139002

Reporting Blank Parameter Limit MDL Result Qualifiers Units Analyzed Calcium, Dissolved ND 0.50 0.029 11/03/15 08:31 mg/L Magnesium, Dissolved mg/L ND 0.50 0.067 11/03/15 08:31

LABORATORY CONTROL SAMPLE: 263155

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

 Calcium, Dissolved
 mg/L
 50
 51.4
 103
 85-115

 Magnesium, Dissolved
 mg/L
 50
 51.3
 103
 85-115

7.0

mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 263156 263157 MSD MS 1255992001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Calcium, Dissolved mg/L 9.2 50 50 59.2 61.2 100 104 70-130 3 20 Magnesium, Dissolved mg/L 5.6 50 50 55.8 58.0 100 105 70-130 4 20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 263159 263158 MS MSD 1256074004 MS MSD MS Spike Spike MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Calcium, Dissolved 50 28.6 50 80.7 81.3 104 105 70-130 20 mg/L

50

58.3

59.2

103

104

70-130

20

1

50

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wkly

Pace Project No.:

1256139

QC Batch: QC Batch Method:

Sulfate

Sulfate

Sulfate

Sulfate

WETA/14461

EPA 300.0

Analysis Method:

EPA 300.0

Analysis Description:

ND

300.0 IC Anions

Associated Lab Samples:

1256139001, 1256139002

METHOD BLANK: 263500 Associated Lab Samples:

Matrix: Water

1256139001, 1256139002

Blank

Reporting

49.6

263503

263505

MS

58.4

Parameter

Units mg/L

Units

mg/L

Result

1255992001

Result

Result

Limit

2.0

MDL

99

0.089

Analyzed 10/30/15 22:09 Qualifiers

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

Parameter

Date: 11/05/2015 01:57 PM

263501

Units

mg/L

Units

mg/L

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

MS

% Rec

MS

% Rec

103

104

90-110

Qualifiers

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

263502

MSD

MS 1256263002 Spike Spike Conc. Conc. 50 49.9 50

50

MS MSD Result Result 102 102

MSD % Rec

104

103

% Rec Max Limits RPD RPD

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

263504

6.9

MS MSD

50

Spike Spike Conc. Conc.

50

MSD Result Result

58.4

MSD % Rec

% Rec Limits

90-110

Max RPD RPD 90-110 0 20

0 20 Qual

Qual

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 11/05/2015 01:57 PM

PASI-V Pace Analytical Services - Virginia

(218) 742-1042



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1256139

Date: 11/05/2015 01:57 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1256139001 1256139002	WS-002 Scrubber Make-Up WS-003 Thickner Overflow	EPA 200.7 EPA 200.7	MPRP/6094 MPRP/6094	EPA 200.7 EPA 200.7	ICP/4711 ICP/4711
1256139001 1256139002	WS-002 Scrubber Make-Up WS-003 Thickner Overflow	EPA 300.0 EPA 300.0	WETA/14461 WETA/14461		

			2 2	8	9	8	7	Ø	C h	٨	ω	N	4	ITEM#	i ca	Register	Email:	Mt. Iron,	Address:	Compar	Section A Required (
		ADDITIONAL COMMENTS							-				WS-002 Scrubber Make-Up	SAMPLE ID One Character per box. (A-Z, 0-91, -) Sample lds must be unique	TOTAL DELICE	Remeded Inter Date:	Fav	2		Company: USS Corporation	A Client Information:	Pace Analytical
		ITOR .										WT	WT	MATRIX Donishing Water Dividing Water Wife Wass weter WIT Wass weter WIT Wass weter WIT Work Product Product	 	Project #	Purchase Order #:		Copy To:	Report To: Tom Moe	Section B	
PRINT Nam SIGNATURE	Soul oroste	RELINCARSHED BY / AFFILIATION											104.80 51.84.01	COLLECTED G=GRAB START G=GRAB START E DATE DATE	1P)	NFOCO-CINC O WAY				n Moe	t Information:	CH The C
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: SIGNATURE of SAMPLER:	11,415186-01	DATE THE										808:40	05,40	SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved	100	Page Profile #:	Page Quo	Address:	Company Name:	Attention:	Section C	CHAIN-OF-CUSTODY / Anal
and weeth la	SML	ay.												H2SO4 HNO3 HCI NaOH Na2S2O3 Methanol		١	Page Project Manager heather		Name:	Attention:	nformation:	ODY / Analyti
DATE Signed:	H	CEPTED BY / AFFILIATION										×	×	Other Analyses Test Y/ LAB FILTERED: SO4 Leb FILTERED: Ca,Mg,Hard		ioau ici zit		CLIENT	PN 110	-u 187	NOT-L	lytical Request Document
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Custody Sealed Cooler (Y/N) Samples Intact (Y/N)		SAMPLE COMBITTOMS						i										Ç			Q	

Pace Analytical*

hold, incorrect preservative, out of temp, incorrect containers)

Document Name: Sample Condition Upon Receipt Form

Document No.: F-VM-C-001-Rev.09 Document Revised: 23Feb2015 Page 1 of 1

Issuing Authority:

Pace Virginia, Minnesota Quality Office

Sample Condition	Client Name:			Project	#: 6		LL, A	OE	342	a	4 (W/K)	1
Upon Receipt	USS Corporation	<u> </u>				Service of the service of	#:1	Section Section	Same Programme	S. 176. 142. 1632	No.	
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	□Commercial □Pace	Other	·				130					
Tracking Number:					Ц	1250			16 32 4 2			/
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Packing Material:	Bubble Wrap Bubble Ba	gs 🗀N	one 🛭	Other:_I	to zyzu	<u>a</u>		Temp	Blank?	Yes	s · 🗀	No
Thermometer Used:	140792808	Type of	٠ ٨	Wet [□Non	ne [4]\$	amples on	ice, coolir	ng prod	cess has	5 begun
•	*C: Cooler Temp C	orrected °	C:			Bi					□No·	
Temp should be abov	e freezing to 6°C Correction Fact	or: }o · 3		Date an	d Initials	of Perso	n Examinin	g Content	s: 10/2	8/15 m	-1	-(L)IVA
		tv-x			T			Commen	ts:			
Chain of Custody Pro		Yes	N₀	N/A	1.		 · ··					
Chain of Custody Fill		Yes	No	N/A	2.							
Chain of Custody Re		k ∕Yes	No	□N/A				·				
Sampler Name and S		YOYes	□No	□N/A	4.				· · · · · · · · · · · · · · · · · · ·	······································		
Samples Arrived with		Yes	□No	N/A	5.						*	
Short Hold Time An		□Yes _	∕ No	□n/a	6.	,,			,			
Rush Turn Around T	ime Requested?	□Yes	No	□N/A	7.							
Sufficient Volume?		Yes,	□No	□N/A	8.				······································	· 		
Correct Containers L	Jsed?	X Yes	□No	□n/a	9.							Î
-Pace Containers	Used?	Yes	□No	□n/a	ļ	·						
Containers Intact?		Yes	□No	□N/A	10.				· · · · · · · · · · · · · · · · · · ·	· · · · · - · -		
Filtered Volume Rec	eived for Dissolved Tests?	Yes	□No	□N/A	11. N	ote If sedi	ment is visil	ole in the d	issolved co	ontaine	rs.	
Sample Labels Matc	h COC?	Yes	ÜÑo	□N/A	12.							
Includes Date/Ti	me/ID/Analysis Matrix: w				}							
	ng acid/base preservation will be	∏Yes	Mivo	T361/6	See p	H log f	for resul	ts and a	ddition	al pre	eservat	tion
	ented in the pH logbook.		PYTAN.	□n/a	docu	menta	tion					
Headspace in Methy		□Yes	□No	K]N/A	13.							
Headspace in VOA V	/ials (>6mm)?	□Yes	□No	N/A	14.							
Trip Blank Present?		∐Yes	□No	. (()N/A	15.			•				
Trip Blank Custody S	Seals Present?	□Yes	□No	K)N/A	!							
Pace Trip Blank Lot #	# (if purchased):			-	<u></u>				····			
CLIENT NOTIFICATIO	N/RESOLUTION						Field I	Data Requ	ired?]Yes T	No	
	Contacted:			ſ	Date/Tin	ne:			٠ ٠	L		
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Project Manager Re	view: HULL	W S	27	U		Date:	10	182/	B_			
	is a discrepancy affecting North Carolin	a complianc	esamples,	a copy of the	his form v	will be sen	t to the Nort	h Carolina	DEHNR Cei	tificatio	n Office (i.	e outof